

CLAIMS:

- Sub A1
1. A resin pipe which is formed by injection molding from a thermoplastic resin or a resin compound based on a thermoplastic resin, wherein said resin pipe has a tapered inner surface to facilitate demolding such that the taper angle ( $\theta$ ) satisfies the following equation.

$$0.5 \times 10^{-3} < \tan \theta < 3.5 \times 10^{-3}$$

- Sub D1
2. The resin pipe as defined in Claim 1, which is an electrically conductive resin pipe formed by injection molding from an electrically conductive resin compound composed of a thermoplastic resin and a conducting material dispersed therein.

3. The resin pipe as defined in Claim 1, which is formed from a resin compound containing at least one resin component selected from a polyamide resin obtained from metaxylylenediamine and adipic acid, a polyamide resin obtained from  $\epsilon$ -caprolactam, and an alloy resin obtained by blending a polyamide resin with a resin having a water absorption no higher than 0.3%.

4. The resin pipe as defined in Claim 1, which contains a reinforcing inorganic filler dispersed therein.

5. The resin pipe as defined in Claim 1, which is a base for a photosensitive drum.

- Sub A3
6. A resin pipe formed by injection molding from a thermoplastic resin or a resin compound based on a thermoplastic resin, said resin pipe having an integrally molded projection radially protruding outward from one end of its outer surface.

7. The resin pipe as defined in Claim 6, wherein the projection is a flange-like one formed on the entire circumference of one end of the outer surface.

8. The resin pipe as defined in Claim 6, which is a cylindrical base for the photosensitive drum to be mounted in electrophotographic apparatus or electrostatic recording apparatus.

9. The resin pipe as defined in Claim 6, which is formed from a resin compound containing as the thermoplastic resin at least one species selected from a polyamide resin obtained from metaxylylenediamine and adipic acid, a polyamide resin obtained from  $\epsilon$ -caprolactam, and an alloy resin obtained by blending a polyamide resin with a resin having a water absorption no higher than 0.3%.

10. A method of producing a resin pipe by injection molding which employs a mold consisting of a first movable plate having therein a cylindrical hollow with open ends, a stationary plate having a sprue for injection of molten resin therethrough, and a second movable plate having a cylindrical core, such that, when in operation, said first movable plate comes into contact with said stationary plate and said cylindrical core enters said cylindrical hollow in said first movable plate, thereby forming a cylindrical cavity between the inner surface of said first movable plate and the outer surface of said core, said injection molding consisting of the steps of injecting a molten resin into said cavity, thereby forming a resin pipe and demolding the thus formed resin pipe by separating said second movable plate from said first movable plate in such a way that said core is pulled away from said resin pipe and separating said first movable plate from said stationary plate, while the resin pipe being held by said stationary plate, said method being characterized in that said cylindrical hollow in said first movable plate has a circular recess on its periphery

adjacent to said stationary plate, said circular recess forms during injection molding a projection protruding radially from the periphery at one end of said resin pipe, said projection preventing said resin pipe from being pulled  
5 away together with the core when said second movable plate is separated from said first movable plate.

11. A cylindrical base for photosensitive drums which is obtained by injection molding from a thermoplastic resin or  
10 a resin compound based on a thermoplastic resin, said cylindrical base having a flange fitted into at least one end thereof to close it, said flange meshing with a gear to drive said cylindrical base, characterized in that said  
15 cylindrical base has a tapered inner surface to facilitate demolding after injection molding, said tapered inner surface having a part which is parallel to the axis, uniform in diameter, and slightly longer than that part of the flange which is fitted into the base.

12. The cylindrical base for photosensitive drums as defined in Claim 11, which has a flange formed integrally with one opening thereof.

13. The cylindrical base for photosensitive drums as  
25 defined in Claim 11, in which the flange formed integrally with one opening thereof is provided with a driving gear.

14. The cylindrical base for photosensitive drums as defined in Claim 11, which is an electrically conductive  
30 base formed by injection molding from an electrically conductive resin compound composed of a thermoplastic resin and a conducting material dispersed therein.

15. The cylindrical base for photosensitive drums as  
35 defined in Claim 11, in which the resin compound contains as a component a polyamide resin obtained from metaxylylene-

diamine and adipic acid and/or a polyamide resin obtained from  $\epsilon$ -caprolactam.

16. The cylindrical base for photosensitive drums as  
5 defined in Claim 11, in which the resin compound contains a reinforcing inorganic filler dispersed therein.

17. A cylindrical base for photosensitive drums which has  
at least one end thereof a resin flange formed integrally  
10 therewith, said flange having a driving gear formed integrally therewith, characterized in that said driving gear or said flange having said driving gear formed integrally therewith is formed from a resin material which is different from that from which said resin pipe is formed.

18. The cylindrical base of photosensitive drums as  
defined in Claim 17, wherein said resin pipe proper and said  
driving gear or said flange having said driving gear formed  
integrally therewith are formed by two-color molding or  
20 insert molding.

19. The cylindrical base for photosensitive drums as  
defined in Claim 17, wherein the resin pipe proper is formed  
from a resin material containing at least one species  
25 selected from a polyamide resin obtained from metaxylylene-diamine and adipic acid, a polyamide resin obtained from  $\epsilon$ -caprolactam, and an alloy resin obtained by blending a polyamide resin with a resin having a water absorption no higher than 0.3%.

20. The cylindrical base for photosensitive drums as  
defined in Claim 17, wherein said driving gear or said  
flange having said driving gear formed integrally therewith  
is formed from a resin material which contains one or more  
35 species selected from polyacetal, polyamide, polyurethane, polyester, polyethylene, polypropylene, polycarbonate,

polybutylene terephthalate, polyphenylene sulfide, polyamideimide, and polyimide.

21. A photosensitive drum consisting of a cylindrical base  
5 and a photosensitive layer coated on the outer surface  
thereof, characterized in that said cylindrical base is  
formed from the cylindrical base for photosensitive drum as  
defined in Claim 17.

NOA<sup>4</sup>2

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